REMARKS

Reconsideration and allowance of the subject application is respectfully requested.

Claim 3 stands objected requesting that the word "second" be inserted before the phrase "cross-connect element" at the end of line 20. That amendment has been made. In addition, other amendments have been made to remove "means" and "step of" language in the claims. Withdrawal of the claim objections is requested.

Claims 1-5, 7-13 and 15 stand rejected under 35 USC §103(a) as being unpatenable over U.S. Patent No. 5,712, 932 to Alexander, in view of U.S. Patent No. 6,421,153 to Way. This rejection is respectfully traversed.

The main problem solved by the present invention is how to construct a compensation scheme that actually works in the tail of a Polarization Mode Dispersion (PMD) distribution depicted in Fig. 2. The scheme does not try to "fight" the tail of the PMD distribution, but instead switches over to another channel where the Differential Group Delay (DGD) is lower. In particular, switching in some layer makes it possible to construct low error, multi-channel systems even if individual channels, uncompensated or compensated, have less than satisfactory performance ratios. As a result, total system bit rates may be increased on links where PMD is a limiting factor. Switching makes it possible to exploit the performance improvements of PMD-compensators, even if they are unsatisfactory when used on a single channel basis.

The primary reference to Alexander discloses a reconfigurable Wavelength Division Multiplex (WDM) system that includes configurable optical routing systems. As admitted by the Examiner, Alexander fails to disclose switching between wavelength channels. To remedy this deficiency in Alexander, the Examiner relies upon the Way patent.

Way teaches method for determining PMD independent of a State of Polarization (SOP). A PMD detector 244 analyzes a pulse shape of an optical signal on the line to determine PMD of the optical signal. A PMD corrector 246 compensates the optical signal for the determined PMD (see Fig. 3).

Despite the Examiner's attempt to "imply that there must be a switch" in the Way patent, such an implication is unsupportable. First, Way does not disclose Wave Division Multiplex (WDM) transmission, but rather an optical link using transmission on a single channel. In column 1, lines 41-51 (relied upon by the Examiner) states that for a degradation of an optical channel "a communication system will automatically switch to an alternate optical channel." But this statement relates to non-WDM-systems which permits switching to another physical link by means of switches provided in the nose. But the present invention relates to "an optical transmission WDM-system." In WDM links, switches typically are not provided.

Second, the focus of Way's invention is to determine PMD and compensate the optical link signal determined PDM. As described above, the present invention does not

necessarily require PMD compensation per se, (it may or may not be employed). Instead, a WDM system employs switches to select the best wavelength bands for high priority information and to select lower quality wavelength bands for lower priority information.

In any event, neither Alexander nor Way disclose an optical transmission WDM system where high priority information is "transmitted in the optical fiber link from the transmitting side to the receiving side in a plurality of wavelength bands" including

> a first switch for transmitting the high priority information in a number of the wavelength bands which is smaller than the total number of wavelength bands.

Nor does either reference disclose

> a controller connected to the first switch for at each instant selecting the wavelength bands used for transmitting the high priority information to give a sufficient total quality of the transmission of the high priority information.

Independent claim 9 similarly recites "a method of transmitting a plurality of wavelength bands high priority information" and

> selecting at each instant wavelength bands for transmitting the high priority information, the number of the selected wavelength bands being smaller than the total number of wavelength bands, and using only the selected wavelength bands for transmitting the high priority information.

Thus, even if the combination of Alexander and Way were accepted for purposes of argument only, that combination fails to disclose the combination of features recited in independent claims 1 and 9. In addition to not disclosing a WDM system with the claimed first switch and controller recited in claim1, Alexander and Way fail to disclose

the claimed second switch of the receiver coupled to the controller" recited in claim 3. Claim 3 further recites that the first and second switches "correspond to a first cross-connect element...in a second cross-connect element." The Examiner has not identified where either reference discloses the claimed first and second cross-connect elements of claim 3.

For the reasons set forth above, Applicants respectfully submit that the application is now condition for allowance. An early notice to that effect is earnestly solicited.

Respectfully submitted,

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